

Appl. No.: 10/632,980
Amdt. Dated: __ July 2006
Reply to Office Action dated 03/02/2006

Amendments to the Claims:

Please amend the following claims as indicated. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) A brake pad assembly for a bicycle for urging a brake shoe ~~brake pads~~ against the ~~sidewall of the bicycle wheel rim of the bicycle~~, the combination comprising:

an elongate support member ~~having a longitudinally extending brake pad holder supported therefrom;~~

longitudinally extending brake pad holder affixed to said support member, said brake pad holder having ~~a closed end and a truncated open end, said holder including a continuous aligned planar flanged surface providing an inward protrusion that defines a perimeter recess for sequentially receiving through said truncated open end multiple unitary brake pads in sequential end abutting relationship along an axis parallel to the contact surface of said sidewall with said brake pads having indentations for mating with said protrusion and with selected ones of said brake pads composed of different braking compounds for imparting a different variously desired braking characteristics to said brake pad assembly;~~

said brake pad holder having a truncated end for slidably receiving said multiple brake pads in said brake pad holder;

said brake pad holder including a continuous planar flanged surface that defines a perimeter recess for receiving said brake pads;

said brake pad holder and said brake pads configured for interchangeability of said brake pads within said brake pad holder; ~~with each said brake pads having a bicycle wheel rim engaging surface generally coplanar with each other; and~~

closure means for complementary mating with said truncated ~~open~~ end for securing said brake pads within said brake pad holder, said closure means including a complementary flanged surface providing said brake pad holder with ~~having an end formed substantially identical to said closed end and an open end for mating with said truncated open end to receive a portion of the~~

~~last inserted brake pad and to provide~~ a continuous ~~planar~~ flanged perimeter recess for retaining said brake pads after insertion in said brake pad holder.

2. (currently amended) The brake pad assembly according to Claim 1 wherein said closure means comprises an end cap that ~~slides over a reduced portion of said holder and mates~~ respective ~~planar~~ flanged surfaces of said end cap and said brake pad holder to provide said continuous perimeter ~~planar flanged~~ recess, said closure means further having locking means providing for secure engagement of said cap with said ~~open~~ truncated end.

3. (currently amended) The brake pad assembly according to Claim 1 wherein said brake pad holder has a longitudinal transverse curvature substantially in conformance with the radius of curvature of ~~said sidewall of the bicycle wheel rim~~ and said brake pads are longitudinally aligned relative to one another and relative to said brake pad holder.

4. (currently amended) The brake pad assembly according to Claim 3 wherein each of said brake pads is comprised of first and second portions separated by an indentation encompassing said brake pad, said first portion captively mounted in said brake pad holder by means of said continuous flanged surface and said second portion extending from said brake pad holder and having a braking surface for contact with said bicycle wheel rim ~~a top portion for mounting into said brake pad holder and a bottom portion extending from said brake pad holder, said bottom portion having a braking surface for contact with the sidewall of said bicycle rim, said top portion and said bottom portions defined by said indentations along each non-abutting longitudinal side of each said brake pad, said flange having inwardly projecting shoulders for mating with said indentations for capturing said top portion within said recess.~~

5. (currently amended) The brake pad assembly according to Claim 4 wherein said first top portion and said indentation is comprised of ~~includes~~ a strengthening compound for preventing operational pull out of said brake pads from said brake pad holder and said second bottom portion is comprised of a compound for imparting a particular braking characteristic to said brake pad.

6. (currently amended) The brake pad assembly according to Claim 4 wherein said flanged surface ~~Claim 3 wherein the mating of said truncated brake pad holder and said end cap in combination provide a longitudinally and circumferentially~~ provides extending capture means

~~inwardly projecting planar flange~~ for interaction with said indentations in said brake pads to slidably receive said first ~~brake pads and capture said top~~ portion of each said brake pad ~~securely within said brake pad holder.~~

7. (canceled)

8. (currently amended) The brake pad assembly according to Claim 1 wherein said closure means includes in combination

~~said indentations in said brake pads and mating inwardly projecting shoulders of said planar flanged surface in said brake pad holder, said brake pad indentations mating with said flanged surface shoulders~~ to slidably receive said brake pads along said flanged surface ~~shoulders;~~

~~a transverse recess in at least the last brake pad inserted into said holder;~~

~~an end cap complementary mating with said truncated end whereby a portion of said last inserted brake pad is encompassed by said end cap; and~~

~~an associated locking pin cooperatively received by said end cap, said truncated end and said recess whereby said brake pads are captured within said brake pad holder.~~

9. (currently amended) A brake pad assembly for a bicycle for urging a brake shoe against the longitudinally extending brake pad holder against the sidewall rim of the bicycle wheel, the combination comprising:

longitudinal extending brake shoe having a continuous ~~said brake pad holder having a longitudinal transverse curvature in conformance with the radius of curvature of said sidewall rim and a planar flanged surface defining an undercut groove for receiving a plurality of brake pads positioned in sequential abutting arrangement therein along an axis parallel to the contact surface of said sidewall, said brake pads configured for interchangeability within said brake shoe and pad holder with~~ selected ones of said brake pads composed of a different braking compound for imparting a different braking characteristic to said brake pad assembly;

~~said groove of said brake pad shoe having holder having a closed end with the other end a truncated open end for receiving said brake pads;~~

complementary end cap means configured ~~substantially identical to said closed end~~ for mating to said truncated end to ~~thereby secure said pads in abutting relationship within said brake shoe, pad holder, said end cap configured with a complementary flanged surface to slide~~

~~over a reduced dimensioned portion of said holder to receive a portion of the last inserted brake pad and to mate respective planar flanged surfaces of said end cap and said holder to provide a continuous planar flanged recess completely around the perimeter of the combination of said brake shoe holder and said end cap for receiving and securing said brake pads therewithin; and~~

~~a locking device cooperatively received by said end cap and said truncated brake shoe end whereby said end cap is securely engaged with said truncated brake shoe end and said brake pads are secured within said brake pad holder.~~

10. (currently amended) The brake pad assembly according to Claim 9, wherein said brake pads ~~each~~ have an overlapping end and an under-lapping end with adjacent pads mating mated with said overlapping end over said under-lapping end; and

~~said overlapping end bearing down on said under-lapping end of an adjacent pad in response to wheel rim movement pressure bearing down on said under-lapping end of an adjacent pad to thereby prevent restrict pull out of said pads from said brake shoe. pad holder.~~

11. (currently amended) The brake pad assembly according to Claim ~~10~~ 9 wherein said continuous flanged recess, said complementary end cap, the mating of the ends of said brake pads, and said locking device cooperating to prevent pull out of said brake pads from said brake shoe. ~~the outside of said truncated end includes an inward cut to provide said reduced dimension portion and said end cap has an interior cut to provide a mating portion configured for slipping over said reduced dimension portion to provide a continuous substantially identical planar flanged recess for said brake pads.~~

12. (currently amended) The brake pad assembly according to Claim 9 wherein each of said plurality of brake pads is comprised of a top portion and a bottom portion, the portions defined by undercut indentations in said brake pads, and each said brake shoe includes ~~pad holder and said end cap including said planar flanged surfaces circumferentially~~ inwardly projecting shoulder means for mating with said indentations, said brake pads slidably received along said shoulder means ~~planar flanged surfaces~~ with said bottom portion extending from said brake shoe ~~pad holder~~ and having a braking surface for ~~planar~~ contact with said bicycle wheel rim.

13. (currently amended) The brake pad assembly according to Claim 12 wherein said top portion and the associated undercut indentation is formed of ~~includes~~ a compound to provide resistance to brake pad pull out ~~from said brake pad holder~~ due to wheel rim moving forces and

said second pad portion is formed of ~~includes~~ a compound to provide a desired breaking characteristic.

14. (currently amended) The brake pad assembly according to Claim 10 wherein the top surface of the outer shell of said brake shoe ~~pad holder~~ includes exposed corrugated indentations ~~providing~~ for increased rigidity and strength.

15. (currently amended) A brake shoe assembly for ~~a bicycle~~ for urging a brake shoe ~~pad holder~~ against the ~~sidewall~~ rim of the bicycle wheel, the assembly comprising:

an elongate longitudinally extending brake shoe ~~pad holder~~ having a ~~closed end and a~~ truncated ~~open~~ end for receiving a plurality of unitary brake pads in abutting arrangement sequentially positioned within said brake shoe, ~~pad holder along an axis parallel to the contact surface of said sidewall~~, each having a rim engaging braking surface generally coplanar with the other ~~and composed of, said brake pads including~~ pre-selected braking compounds for imparting a variety of braking characteristics to said brake pad assembly, said brake shoe ~~pad holder~~ and said brake pads configured for slidable interchangeability of said brake pads within said brake shoe ~~pad holder~~;

each of said brake pads comprised of a top portion and a bottom portion defined by an ~~a~~ longitudinal indentation undercut from said top portion and encompassing each brake pad on at least ~~on both sides thereof~~, said brake shoe ~~pad holder~~ including ~~circumferentially~~ inwardly projecting shoulders configured for mating with said indentation whereby said brake pads are slidably received along said shoulders, said bottom portion extending from said brake pad holder and having a braking surface for contact with said bicycle wheel rim; and

complementary end cap ~~closure means configured substantially identical to said closed end~~ for mating to said truncated end to thereby secure said pads in abutting relationship within said brake shoe, ~~pad holder~~, said closure means ~~end cap~~ configured with a complementary flanged surface ~~to slide over a reduced dimensioned portion of said holder to receive a portion of the last inserted brake pad and to mate respective planar flanged surfaces of said end cap and said holder~~ to provide a continuous planar flanged recess completely around the perimeter of the combination of said brake shoe ~~holder~~ and said closure means ~~end cap~~ for receiving and securing said brake pads ~~therewithin~~.

16. (currently amended) The brake pad assembly according to Claim 15 wherein said brake pads have an overlapping end and an under-lapping end with adjacent pads mated with said overlapping end over said under-lapping end, and said overlapping end bears down on said under-lapping end of the adjacent pads preventing thereby aiding in prevention of pull out of said pads from said brake pad holder due to wheel rim movement pressure.

17. (currently amended) The brake pad assembly according to Claim 16 ~~Claim 15~~ wherein said ~~end cap~~ closure means is configured as an end cap and includes when mated to said truncated end encloses a portion of the last brake pad inserted into said truncated end, said last inserted brake pad having a transverse recess, said end cap, said recess and said truncated end configured for cooperatively receiving locking means for fixedly mating said end cap to said truncated end for positioning and capturing said brake pads within said brake pad holder.

18. (currently amended) The brake pad assembly according to Claim 17 wherein said brake ~~shoe pad holder~~ has longitudinal transverse curvature substantially in conformance with the radius of the bicycle wheel rim and each of said brake pads ~~when mounted in said brake pad holder~~ has a rim engaging surface generally coplanar with the ~~each other brake pad and with said sidewall of the bicycle wheel rim.~~

19. (currently amended) A method for selectively changing braking characteristics of a brake pad assembly for a bicycle comprising:

providing a longitudinal extending brake shoe having a continuous planar flanged recess for receiving brake pads and a truncated end; pad holder having a transverse curvature in conformance with the radius of curvature of the bicycle wheel rim, said pad holder including a closed end and a truncated open end for slidably receiving selected brake pads in sequential abutting relationship in said brake pad holder along an axis parallel to the contact surface of said sidewall;

providing multiple unitary brake pads in sequential abutting relationship in said brake shoe with selected ones of said brake pads composed of different braking compounds for imparting a different braking characteristic to said brake pad assembly;

slidably inserting selected brake pads in said brake pad shoe through said truncated end;

slidably interchanging said brake pads as desired to effect provide different braking characteristics of to said brake pad assembly; and

providing end cap closure means ~~configured substantially identical to said closed end for~~
~~complementary mating with~~ to said truncated end for securing said brake pads within said brake
shoe, to thereby secure said pads within said brake pad holder, said end cap configured with a
complementary flanged surface ~~to slide over a reduced dimensioned portion of said truncated~~
~~end to receive a portion of the last inserted brake pad and to mate respective planar flanged~~
~~surfaces of said end cap and said holder~~ to provide a continuous planar flanged recess completely
around the perimeter of the combination of said brake shoe holder and said end cap for receiving
and securing said brake pads ~~therewithin.~~

20. (currently amended) The method of claim 19 wherein at least one of said brake pads has a
top portion formed of ~~including~~ a compound to provide resistance to brake pad pull out ~~of said~~
~~brake pad holder~~ due to wheel rim moving forces and a bottom portion formed of ~~including~~ a
compound to provide a desired braking characteristic.